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THE GENUS PELLUCIDOMYIA MACFIE (DIPTERA, CERATOPOGONIDAE)

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Macfie in 1939 described the new genus and species, *Pellucidomyia ugandae,* from two females taken in the highlands of southern Uganda. In 1946 Lane proposed the genus *Macfiehelea* for *oliveirai* Lane, known from a single female from Brazil. In 1956 Lane added two more species from Panama to *Macfiehelea.* In 1956 I collected two female specimens in Queensland, Australia, which agree generically with *Pellucidomyia* and *Macfiehelea,* genera which I am forced to consider synonymous. The purpose of this paper is to point out the salient characters of the genus, to give a key to the known species, and to describe the new species from Australia.

Genus *Pellucidomyia* Macfie

Pellucidomyia Macfie, 1939, Ruwenzori Exped., 1934–5, vol. 1, no. 5, Ceratopogonidae, p. 99. (Type: *Pellucidomyia ugandae* Macfie, monobasic.)

Macfiehelea Lane, 1946, Rev. de Ent. 17: 208 (Type: *Macfiehelea oliveirai* Lane, monobasic); Lane, 1956, Rev. Brasil. Biol. 16: 435 (key to 3 Neotropical spp.). NEW SYNONYMY.

Diagnosis.—Body densely white or blackish pollinose above. Head flattened anteroposteriorly, the unflattened portion with same pollinosity as scutum; eyes broadly separated; antennae moderately long, with sparse basal verticils; palpus 5-segmented, third segment slender, without pit. Scutum conically produced anteriorly, without anterior spine or tubercle. Legs slender, femora unarmed, slightly club-shaped distally; fore legs short, mid legs moderately

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long, hind legs very long; fourth tarsomere cordiform to transverse on fore and mid legs, long and cylindrical on hind leg; fifth tarsomere unarmed, swollen on fore leg, not on mid and hind legs; claws equal and simple on fore and mid legs, a single very long claw on hind leg. Wing venation similar to that of *Bezzia;* one radial cell; costa extending to 0.8 of wing length; microtrichia absent or very small, wing appearing milky or blue iridescent; macrotrichia absent. Abdomen of female without gland rods; with a pair of tufts of long hairs ventrally on eighth segment; two spermathecae; abdomen more or less curled ventrally under body. Male unknown.

The genus *Pellucidomyia* is closely related to the genera *Clinohelea* Kieffer, *Metahelea* Edwards, *Tetrabezzia* Kieffer, *Ceratobezzia* Kieffer, *Heteromyia* Say and *Neurohelea* Kieffer. These genera all have the fifth tarsomere unarmed, the eighth abdominal segment of the female abdomen with a pair of ventral tufts of long hairs, gland rods absent and the claws unequal, at least on the hind legs.

Pellucidomyia leei Wirth, n. sp.

Female.—Length about 2.5 mm., wing 2.0 mm.

Body very dark brown, almost black; flattened vertex of head, broad median portion of scutum to breadth of scutellum, scutellum and all of abdominal dorsum, densely pearly white pollinose. Antenna black except major portion of enlarged second segment dorsally yellowish. Palpus black. Legs mostly pale yellow, the following dark brown: coxae, trochanters, distal half of fore femur and narrow apices of fore tibia, four proximal tarsomeres and all of fifth tarsomere of fore tarsus; proximal third and distal fourth of mid femur, narrow apices of mid tibia, first and second tarsomeres and all of third and fourth tarsomeres of mid tarsus; proximal fourth and distal third of hind femur, narrow apices of hind tibia and first tarsomere, and all of distal tarsomeres of hind leg, the distal bands on hind femur and tibia much more intense, appearing blackish. Abdomen slender, curving down posteriorly, the segments convex dorsally; each tergum with a pair of small blackish sensory pits; first tergum with anterior portion slightly elevated and bearing long fine pale hairs, the posterior portion less densely pollinose and appearing blackish in some lights; last segment blackish, cerci yellowish. Scutum without apparent vestiture, slightly elevated in mid-line at mid-length, subconically produced anteriorly on anterior margin; surface appearing obliquely rugulose, the rugulae directed posteriorly toward mid-line where the pollinosity is not quite so dense. Other characters as in generic diagnosis.

Male.—Unknown.

Types.—Holotoype female, Hartley's Creek, north of Cairns, Queensland, 24 April 1957, W. W. Wirth (type no. 64756, U.S.N.M.). Paratype, 1 female, same data as type, deposited in collection of the School of Public Health and Tropical Medicine, University of Sydney, Australia. These specimens were swept from vegetation bordering a small stream near the coast in rather open gum forest.

I take great pleasure in naming this species in honor of David J. Lee, of the School of Public Health and Tropical Medicine of the University of Sydney, a distinguished authority on Australian Ceratopogonidae, with whom I had the privilege of working in 1956–57 at Sydney on a Fulbright Research Scholarship.

Key to the Species of Pellucidomyia

1. Femora entirely blackish or dark brown; body whitish pollinose from head to tip of abdomen 2
   Femora with broad yellowish bands, tibae yellow 4
2. Mid and hind tibiae blackish with only a narrow basal pale band (Brazil) ..... *oliveirai* (Lane)
   Tibial markings otherwise 3
3. Mid tibia blackish with narrow subbasal brown band; hind tibia yellowish with an apical blackish band (Panama) ..... *wirthi* (Lane)
   Mid tibia yellowish on proximal half, blackish distally; hind tibia yellowish with broad subbasal and apical brown bands (Panama) ..... *blantoni* (Lane)
4. Body whitish pollinose from vertex to tip of abdomen; mid and hind femora narrowly dark at bases and apices (Queensland) ..... *leei,* n. sp.
   Body dull black dorsally, legs yellow except narrow dark band at apex of hind femur and at apex of hind tibia (Uganda) ..... *ugandae* Macfie

The occurrence of five such closely related species, structurally similar but easily recognizable on characters of coloration, on each of the three large continents of the Southern Hemisphere where tropical conditions exist, but not in the more thoroughly collected Northern Hemisphere, is remarkable and suggests speculations on their geographical origin and distribution . Not much more can be said, however, until the tropical parts of Asia are more thoroughly collected in order to ascertain whether *Pellucidomyia* is a Pantropical genus or of more restricted distribution.